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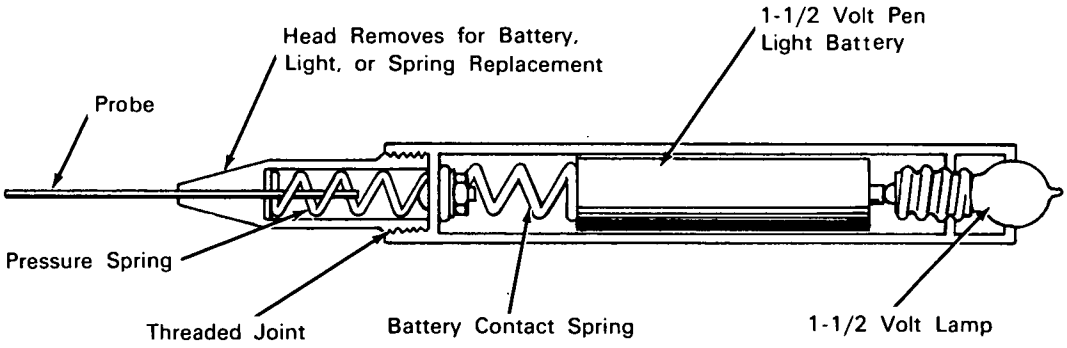
Brief 65-10111

NASA TECH BRIEF

Probe Tests Microweld Strength



The problem: Inspection of microwelds is necessary because of the problems of material variation, human error, and process control inherent in microwelding techniques. However, visual inspection alone is not reliable.

The solution: A pressure-adjustable spring-loaded probe to test soldered, brazed, or microwelded joints. The probe is more reliable than mere visual inspection since any desired test pressure may be applied to the joint.

How it's done: The spring-loaded probe may be adjusted to the desired test pressure by means of a threaded probe head. As pressure is applied to the weld, the probe is forced into the probe housing, thus depressing the spring. When the desired pressure has been applied to the weld, the probe makes contact with a 1-1/2-volt penlight battery causing a 1-1/2-volt indicator lamp to be lighted. Visual inspection will determine whether or not the weld was able to withstand the test pressure.

Notes:

1. The battery spring acts as an overtravel spring in case the test probe overtravels after the indicator lamp has been lighted.
2. This device should find use in the electronics industry for the reliable testing of soldered, brazed, or microwelded joints.
3. Inquiries concerning this innovation may be directed to:

   Technology Utilization Officer
   Western Operations Office
   150 Pico Boulevard
   Santa Monica, California, 90406
   Reference: B65-10111

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: Douglas Aircraft Company, Inc.
under contract to Western Operations Office
(WOO-118)

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